

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/HU2005/000013

International filing date (day/month/year)
16.02.2005

Priority date (day/month/year)
20.02.2004

International Patent Classification (IPC) or both national classification and IPC
C02F3/12, C02F3/30

Applicant
KÖRTE-ORGANICA

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

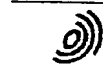
If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/HU2005/000013

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/HU2005/000013

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	2,3,5,6
	No: Claims	1,4,7
Inventive step (IS)	Yes: Claims	
	No: Claims	2,3,5,6
Industrial applicability (IA)	Yes: Claims	1-7
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item V.

1. Reference is made to the following documents:

D1 : US 6 190 554 B1 (MANDT MIKKEL G) 20 February 2001 (2001-02-20) cited in the application

D2 : EP 1 099 668 A (INGERLE, KURT) 16 May 2001 (2001-05-16)

D3 : US 6 398 957 B1 (MANDT MIKKEL G) 4 June 2002 (2002-06-04) cited in the application

D4 : DE 198 16 076 A1 (ARATEC PLANUNGS- UND VERTRIEBSGESELLSCHAFT M.B.H., KLAGENFURT, AT) 15 October 1998 (1998-10-15)

2. Document D1 discloses (the references in parentheses applying to this document): An equipment (apparatus) for the treatment of wastewater which has (see fig.1) a main reactor (104) and an anterior reactor (102) as well as facilities for feeding in untreated water, removing cleaned water and sludge (see also column 9, lines 56-66), aerating means in the main reactor (see column 9, lines 9-26), and a mixer in the anterior reactor (see column 7, lines 49-57). Between the main reactor and the anterior reactor there are facilities for the recirculation of wastewater (see column 8, lines 1-26).

D1 also discloses a process operating the apparatus described above in which (see fig.1) in a filling phase the main reactor is filled up to a maximum level with sludge taken from the lower part of the anterior reactor; in a following reaction the main reactor is aerated while the wastewater is recirculated between the reactors: then the sludge is settled and the treated sewage is drained from the equipment by decanting (see also column 9, lines 27-55). The excess sludge is also removed from the reactors (see fig.1).

As can be seen from the above, document D1 discloses in combination all the

features defined in independent claim 1 and independent claim 7. Hence the subject-matter of these claims is not new (Article 33(2) PCT).

3. Dependent claims 2-6 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the EPC with respect to novelty and inventive step because those features have already been described in the cited documents or can presently only be regarded as merely defining options, possibilities or normal design procedures and thus would not comply with Article 33(1)(3) PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).
4. Documents D2-D4 also disclose the features of independent claim 1. Therefore claim 1 is not new with respect to D2-D4 (Article 33(2) PCT).

Re Item VII

Certain defects in the international application

According to the requirements of Rule 11.13(I) reference signs not appearing in the description shall not appear in the drawings, and vice versa. This requirement is not met in view of the reference sign (5) for a pump (page 7 of the description), which does not appear in the figures and sign "Z" (page 7) for the mechanical mixer.

Re Item VIII

Certain observations on the international application

It appears from the description that the recirculation of liquid to the anterior reactor II is ensured by the opening (8) (see page 8 and page 11 of the description). This statement is not fully in agreement with the first sentence of claim 2 in which the recirculation is carried out by a U-shaped pipe-piece.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/HU2005/000013

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 C02F3/12 C02F3/30

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 C02F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 190 554 B1 (MANDT MIKKEL G) 20 February 2001 (2001-02-20) cited in the application column 7, line 47 - column 9, line 66; figure 1	1-7
X	EP 1 099 668 A (INGERLE, KURT) 16 May 2001 (2001-05-16) abstract; figure 1	1.4
X	US 6 398 957 B1 (MANDT MIKKEL G) 4 June 2002 (2002-06-04) cited in the application figures 1,2	1-7
X	DE 198 16 076 A1 (ARATEC PLANUNGS- UND VERTRIEBSGESELLSCHAFT M.B.H., KLAGENFURT, AT) 15 October 1998 (1998-10-15) the whole document	1

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
 "E" earlier document but published on or after the international filing date
 "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
 "O" document referring to an oral disclosure, use, exhibition or other means
 "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
 "&" document member of the same patent family

Date of the actual completion of the international search

8 July 2005

Date of mailing of the international search report

22/07/2005

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Authorized officer

González Arias, M

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/HU2005/000013

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6190554	B1	20-02-2001	AU 2893999 A 20-09-1999
			CA 2322696 A1 10-09-1999
			EP 1070023 A1 24-01-2001
			IL 138198 A 01-06-2004
			JP 2002505191 T 19-02-2002
			NZ 506595 A 26-09-2003
			WO 9944951 A1 10-09-1999
			US 2003136731 A1 24-07-2003
			US 6398957 B1 04-06-2002
EP 1099668	A	16-05-2001	EP 1099668 A1 16-05-2001
US 6398957	B1	04-06-2002	US 6190554 B1 20-02-2001
			US 2003136731 A1 24-07-2003
			AU 2893999 A 20-09-1999
			CA 2322696 A1 10-09-1999
			EP 1070023 A1 24-01-2001
			IL 138198 A 01-06-2004
			JP 2002505191 T 19-02-2002
			NZ 506595 A 26-09-2003
			WO 9944951 A1 10-09-1999
DE 19816076	A1	15-10-1998	AT 2014 U1 25-03-1998

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